

ABSTRACT OF THE DISCLOSURE

Packaging assemblies for optically interactive devices and methods of forming the packaging assemblies in an efficient manner that eliminates or reduces the occurrence of process contaminants. In a first embodiment, a transparent cover is attached to a wafer of semiconductor material containing a plurality of optically interactive devices. The wafer is singulated, and the optically interactive devices are mounted on an interposer and electrically connected with wire bonds. In a second embodiment, the optically interactive devices are electrically connected to the interposer with backside conductive elements. In a third embodiment, the optically interactive devices are mounted to the interposer prior to attaching a transparent cover. A layer of encapsulant material is formed over the interposer, and the interposer and encapsulant material are cut to provide individual packaging assemblies. In a fourth embodiment, the optically interactive devices are mounted in a preformed leadless chip carrier.

N:\2269\5710\pat.app.doc